



USER MANUAL

BACKBOILER PELLET-OLIVE STONE

Electronic regulation of boilers and installation elements
(heating circuits and Sanitary Hot Water)



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2. Symbol Description



This symbol highlights those parts of the text that try to avoid mistakes when handling the boiler. The omission of these instructions could cause material damages and harm your health in case of wrong handling.



This symbol highlights those parts of the text that try to help with a better understanding of the boiler regulation or the heating circuit.

3. Safety Recommendations

- Do not open the combustion chamber or the ash pan door during the working process.
- Do not allow making operations with the boiler to people who are not familiar with it or do not have training related to the installation and to the **Bronpi** boilers.
- Prevent children from being alone in the heating room without any supervision!
- Keep animals away!
- If you notice visible damages (e.g. water leaks, thermal deformations, smoke or fire traces, mechanical imperfections, etc.) you should neither continue with the service nor restart it. The faults need to be repaired. In case of any doubt, please contact a specialized technician or the technical service.
- If the installation remains stopped during a long period of time you should guarantee an absolute antifreeze protection in every part where the water is stored in.
- **Bronpi** boilers should not be submitted to any external mechanical load (e.g. tray, rise means, support, or similar.) This remark also applies to its individual components (door, cover, etc.)
- During the working process you can only touch the door handles. The temperature could reach very high values in some other parts (smoke pipe, ash pan door, etc.)
- Use fireproof gloves when restocking the combustible material.
- **Bronpi** boilers will exclusively be used under prescriptions given by the planning, installation, rules, laws, and instructions related to the product. Either the manufacturer or distributor is not responsible for the damages or the consequences attributable to an incorrect installation, application, or handling or to an insufficient maintenance or cleaning.
- Regarding the legionnaire's disease, current general technical rules must be respected.
- **Note: UK HETAS regulations as stated in document J combustion appliances and fuel storage systems.**

3.1. Safety Devices



Bronpi boilers have several safety systems that guarantee a safe and an appropriate operation and protect both the boiler and the user. Some of them are described below. If in doubt, see sections 7.5 and 7.6.

- **Ignition Failure**

If it does not appear a flame during the ignition process, the equipment will show in the display the message **"IGNITION FAILURE."** If you try again to ignite the machine, the display will show the message **"WAITING COOLING."**

This function serves to remind that before carrying out the starting up it is necessary to check that the burner is completely clear and clean.

- **Smoke Pipe Breakdown**

If the extractor stops, the electronic card automatically blocks the pellet or the olive stone supply.

- **Fuel Load Motor Breakdown**

If the geared motor stops, the boiler keeps on working (only the smoke extractor) until the minimum working smoke temperature goes down and stops.

In the case that the geared motor spins continuously, the boiler will cut its electrical supply. In the event of this happening, the boiler will go into an alarm state.

- **Electricity Temporary Failure**

After a short lack of electricity, the equipment restarts up automatically. In the event of a lack of electricity the boiler could give off a reduced amount of smoke during a period of time of 3-5 minutes. **THIS DOES NOT ENTAIL ANY SAFETY RISK.** This is why **Bronpi** advises, whenever possible, to connect the primary air inlet pipe with the exterior of the house in order to assure that the boiler cannot give off smokes after the mentioned lack of electricity.

- **Electrical Protection**

The boiler is protected against abrupt electricity oscillations through a general fuse placed in the back part of the boiler. (4A250V Retarded) (Picture 1).

- **Exhaust Stack Protection**

An electronic pressure switch blocks the operation of the boiler in the event of an abrupt change in the pressure inside the combustion chamber (door opening, smoke extraction motor breakdown...). In the event of this happening, the boiler will go into an alarm state. (Picture 2).

- **Protection for High Temperature Inside the Fuel Storage Tank (Hopper -80 °C)**

In the event of an overheating of the internal part of the tank, this device blocks the operation of the boiler. The restart needs to be done manually, dismantling its black protection and pressing the white switch. This manual restoration needs to be done by an authorised technician (Picture 3.)

The restoration of the 80 °C safety device is not included in the warranty unless the support service demonstrates a faulty component.

- **Water Over Temperature Protection (90 °C)**

When the water temperature inside the boiler circuit is near about 100°C, the fuel loading is blocked. **If the temperature gauge goes off, the restart needs to be done manually, dismantling its black protection and pressing the white switch. This manual restoration needs to be done by an authorised technician.**

The restoration of the 90 °C safety device is not included in the warranty unless the support service demonstrates a faulty component.

- **Hydraulic Pressure Transducer**

If the pressure inside the hydraulic installation is lower than 0.4 bars, the fuel loading motor electricity supply gets blocked. If the pressure inside the installation exceeds 2.5 bars, the display will show the alarm "WATER PRESSURE FAILURE". The restoration of the safety device will be done by pressing button no. 4 (On/Off) during, at least, 3 or 4 seconds (Picture 4.)



Warning: the occasional presence of air in the installation can provoke the intervention of the pressure transducer. If the device intervenes blocking the fuel load in the machine, the alarms related to the lack of fuel may activates.

In order to get a proper performance of the product, the ideal pressure of the installation should be tared in, approximately, 1.0 bars when the installation is cold; furthermore, it is necessary the absolute absence of air. **Bronpi Calefacción advises to have an adequate air purged circuit inside the installation. The occasional operation of air purging inside the installation or the product is not included in the warranty.**

- **Installation Safety Devices**

It is **COMPULSORY** to have a pressure gauge to visualize the water pressure during the installation.



Warning!!!

The closed expansion tank of the installation should have a dimension between 4 and 6% of the total volume of installation; this is why the standard closed expansion tank could be inadequate in case of higher water volumes.



Picture 1



Picture 2



Picture 3



Picture 4

4. Technical Features

Characteristics	KARINA	
	Pellet	Olive Stone
Weight (Kg.)	263	
Height (mm)	1402	
Width (mm)	660	
Depth (mm)	716	
Smoke outlet pipe diameter (mm)	100	
Air inlet pipe diameter (mm)	60	
Performance at nominal power (%)	93	94
Performance at reduced power (%)	96	-
Maximum global thermal power (Kw)	27,6	27,6
Maximum usable thermal power (Kw)	27,6	27,6
- Power transferred to the air (Kw)	1,9	2,2
- Power transferred to the water (Kw)	25,7	25,4
Minimum usable thermal power (Kw)	9	-
- Power transferred to the air (Kw)	1	-
- Power transferred to the water (Kw)	8	-
Minimum fuel consumption Kg/h	1,9	-
Maximum fuel consumption Kg/h	6	6,5
Tank capacity (Kg)	100	110
Minimum/maximum power autonomy (h)	53 / 16	17
Recommended draw at maximum usable power (Pa)	± 12	± 12
Recommended draw at minimum usable power (Pa)	± 12	-
Power consumption (W)	150-250	
Power consumption during ignition (W)	500	
Water inlet/outlet connection diameter	1"	
Maximum working hydrological pressure (bar)	2,5	
Working hydrological pressure (bar)	1,5	
Volumen of the closed expansion vessel (l)	8l	
Maximum service temperature (°C)	80	

Heating circulating pump	YES
Cast-iron interior	NO
Automatic ignition	YES
Fuel safety thermostat	YES
Water safety thermostat	YES
Pressure switch (maximum/minimum pressure)	YES
Safety valve 3 bar	YES
Drain valve	YES
Weekly programmer	YES
Heat exchangers cleaning	YES
Automatic burner cleaning	YES
Heating management and Hot Domestic Water	YES
OASYS System	YES

5. Fuels



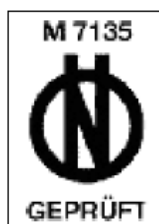
In order to guarantee a proper combustion, it is necessary to fulfill all quality standards in all fuels. The use of fuels in disagreement with the specifications mentioned below implies the cancellation of the warranty and the responsibility bounded to the product.

If you use fuels according to the present specification, we guarantee an impeccable working and good performance values of the installation. In the event of not knowing any distributor who meet these criteria, we would kindly inform you about the distributors that you may be interested in.

5.1. Pellet

- **Quality standard**

Only wood pellet certified under the standards **Ö-Norm M7135** or **DINplus** should be used.



Besides these rules, BRONPI CALEFACCIÓN, S.L. stipulates the following requirements for wood pellet:

- o **Diameter:** The pellet diameter should not be either lower than 6 mm or higher than 8 mm.

- o **Minimum length:** The **weight proportion** corresponding to those wood pellets with a **length lower than 10 mm should not exceed 20%** of the **total combustible mass**.
- o **Additional requirements to fuels:**
 - Ashes sintering point: The ashes sintering point should be higher than **1100°C**.
 - Ashes fusion point: The ashes fusion point should be higher than **1200°C**.
 - Ashes softening point: The ashes softening point should be higher than **1150°C**.

- **Transport and storage**

However, the really important thing is to fulfill the transportation rules, since it is possible to damage good quality pellets just by handling them in the wrong way during the transportation or the pouring in the hopper. The pellets transportation to the final customer, or to the intermediate distributor, and the subsequent distribution are ruled by the “**ÖNorm 7136 pellets transportation and storage**.” Based on this rule, it is the symbol “**DIN approved pellets logistics specialised company**”. Please, only choose suppliers who transport and storage pellets according to the “ÖNorm 7136 Transport” or certified with the symbol “DIN approved pellets logistics specialised company.”



5.2. **Olive stone**

- **Humidity:** The level of humidity in the pit should be between 6 and 8%. If the fuel does not have the appropriate humidity it could generate some oils during the combustion. This will make the chambers of the stove get dirty and it generates corrosion.
- **Dimensions:** The grain size of the pit should be between 3 and 4 mm. The combustion burner has to be the right one for the olive stone combustion. Normally, the olive stone generates a bigger waste of ashes and non-burnt pieces than the pellet. This is why it is so important to clean the burner daily and to do a deep cleaning of the stove every 6 months rather than once a year.

6. **Start-up**

Configuration of the electronic regulation is very important regarding energy saving. During the starting-up, it is convenient to have the first configuration done by a specialised technician. At the same time, in order to guarantee an optimal output, the boiler and its components have to be received in situ by an authorised specialised technician.

Before connecting the boiler to the voltage, you need to check every point of the following list:

- **Assembly instructions observation:**

Has every assembly step been properly done according to the instructions?

- **Ash pan control:**

Ash pan door



Ash pan



Ash pan chamber



Check there are not foreign bodies inside both the chamber where the ash pan is placed and the interior. Also, check the vermiculite parts placed on the door and inside have not moved during the shipment. While the boiler is working, none of its parts or instruments should be inside the ash pan or the loading

compartment. Close the door and check that you can close it perfectly.

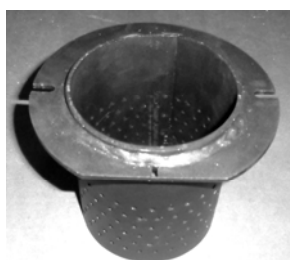
- **Combustion chamber control**

Combustion chamber door



Please check that there are no objects inside the combustion chamber and place inside the appropriate burner for the chosen working mode of the boiler as it is shown in the following pictures. Note that the incorrect placement of the burner may cause problems in the combustion.

- **Burner**



- Plug in

Once all these points have been checked, please connect the socket with a grounded socket base of ~230V/ 10A retarded.

It is important to take into account the following points:

- o The system should have been run according to the rule VDE 0100.
- o The connection with the electric power network should not be done through an extension lead (fire risk!)
- o It is advisable to install an automatic switch.
- o Compare the machine nameplate data with the data calculated from your power network.

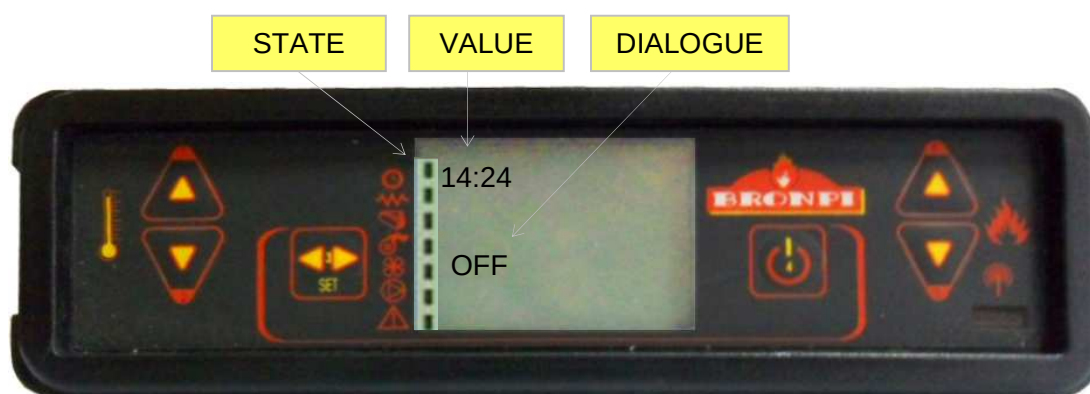
7. Display

7.1. Display General Information



The display shows information about the boiler performance. Once you access the menu, you can get different types of screen and adjust the available configuration according to the level of access. Depending on the working mode, the display may have different meanings depending on the position of the screen.

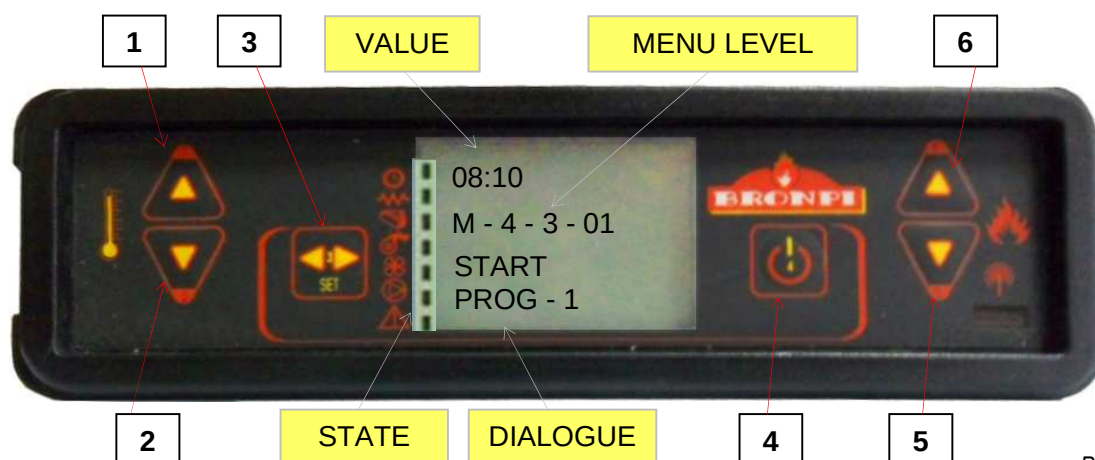
Picture 1 shows an example of a boiler turned on or turned off.



Picture 1

Picture 2 shows the layout of the messages during the programming or configuration of the working parameters. Particularly:

1. The screen area saying "VALUE" shows the value that we introduce.
2. The screen area saying "MENU LEVEL" shows the current menu level. Check "menu" section.



Picture 2

Picture 3 shows the meaning of the symbols appearing on the left hand side of the screen.

The screen lighting in the section “status” shows the activation of the corresponding device according to the following list.

Picture 3

	CLOCK
	RESISTOR
	ENDLESS
	SMOKE EXTRACTOR
	HEAT EXCHANGER
	NOT IN USE
	ALARM

7.2. Functions of the Display's Buttons

Button	Description	Modality	Performance Description
1	Increases Temperature	PROGRAMMING	Modifies/Increases the value of the selected menu.
		ON/OFF	Increases the ambient thermostat temperature value.
2	Decreases Temperature	PROGRAMMING	Modifies/Decreases the value of the selected menu.
		ON/OFF	Decreases the ambient thermostat temperature value.
3	Menu (Set)	-	Access the menu.
		MENU	Access the following level in the submenu.
		PROGRAMMING	Confirms the selected value and move to the following option in the menu.
4	ON/OFF Unblocking	WORKING	It switches on or off the boiler during 2 seconds, as appropriate.
		UNBLOCKING	Unblocks the boiler and switches it off.
		MENU / PROGRAMMING	Goes back to the previous level menu and saves the modified data.

5	Decreases Power	ON/OFF	Decreases the output value of the boiler.
		MENU	Moves to the previous menu option.
		PROGRAMMING	Goes back to the previous submenu value.
6	Increases Power	ON/OFF	Increases the output value of the boiler.
		MENU	Moves to the following menu option.
		PROGRAMMING	Moves to the following submenu option.

(NOTE:) You can gain access to the water temperature adjustment by pressing button nº1 just once.

7.3. Menu

By pressing button no. 3 we can access the MENU. It is divided into several sections and levels that allow accessing the configuration and programming of the boiler.

The elements of the menu that allow the access to the technical programming of the boiler are protected by a password. These parameters should be modified only by an authorised technician. (The changes in these parameters could cause a wrong running in the boiler and the subsequent lost of the warranty.)

7.3.1. User Menu

The following table briefly describes the menu structure in the boiler. In the attached table, only the options available to the user are specified.

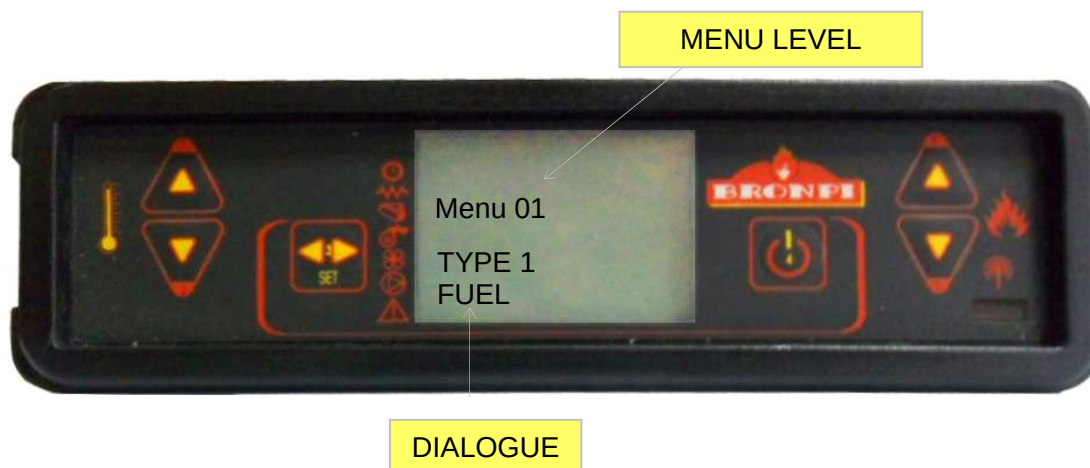
Level 1	Level 2	Level 3	Level 4	Value
01 – Choose fuel	See chapter 7.3.2. of this manual			
02 – Season state				Summer/Winter
03 – Clock adjustments				
	01- Day			Week Day
	02- Hour			Hour
	03- Minute			Minute
	04- Day			Month Day
	05- Month			Month
	06- Year			Year
04 – Programme adjustment	See chapter 7.3.5 of this manual			
05 – Select language				
	01 - Italian			Set
	02 - French			Set
	03 - English			Set
	04 - German			Set
	05 - Portuguese			Set
	06 - Spanish			Set

06 – Stand-by mode				On/Off
07 – Sound mode				On/Off
08 – Initial load				Set
09 – Boiler state	Provides information on the status of the boiler.			
10 – Technical adjustment	Exclusive access to authorised personnel.			

7.3.2 Menu 1. Choosing Fuel



It establishes the fuel that we are going to use, either pellet or olive pit. In the event of using wood pellet we will select “TYPE 1” while if we are going to use olive stone we will select the option “TYPE 2”. Due to the existence of several fuel qualities, **Bio-Bronpi** boilers allow to choose a third type of fuel “TYPE 3”. With this option, we try to get a good combustion although the fuel has lower quality. However, it is necessary to reach some minimum quality requirements. For this reason, in the case of using adulterated fuel, with high humidity, low density, anomalous size or with presence of impurities... **Bronpi Calefacción S.L. will not be responsible for the damaged caused by this.**



7.3.3 Menu 2. Summer/Winter Mode



This menu has two options: “SUMMER” and “WINTER.”

In the event of selecting the “winter” mode we need to take into account that the boiler will allow us to use simultaneously the heating system together with the SHW (Sanitary Hot Water) heating system. We always need to give priority to the SHW heating system and it needs to be directly installed to our **Bronpi** boiler. In the event of having connected the boiler only with our heating circuit, the boiler will work, anyway, in the same way and it will only

regulate the performance with the values we want. It is advisable to use this working mode during the coldest periods.

In the event of selecting the “summer” mode, a proper operation is only guaranteed when we have installed an SHW heating system. This is due to the fact that during the summer season the boiler considers unnecessary the use of heating systems, so it will be only work in the case of demanding hot sanitary water. When our installation does not have the SHW heating system it is advisable to select the “winter” mode.



7.3.4 Menu 3. Set up Clock

It sets up the time and date. The card has a lithium battery that allows the clock to work during 3/5 years.



7.3.5 Menu 4. Programme Setting



IMPORTANT: Before proceeding to set up the boiler, please check that the time and the date shown are correct; otherwise, the selected programming would be set up depending on the time and date set by default and this could not satisfy your needs.

In order to set up our boiler, we need to access the programming menu by pressing button no.3 “SET” only once. With buttons no.5 and no.6 we can move through the menu no.2 “Programme Setting”:



To confirm this option, press again button no. "SET"; this way, we have indicated the machine that we want to access the programming menu.

To see the different submenus we need to press buttons no. 5 and no. 6.

7.3.5.1 Sub-menu 04.01. Set up Chrono



To inform the boiler that we need to set up the chrono, we need to go to submenu 3-1 "Set up Chrono" and, by pressing button no.3 "SET", it will show, by default, the following screen:



In the upper left margin it is shown, by default, the word "OFF"; however, by pressing buttons no.1 or no.2 we should be able to change it to "ON" mode in order to inform the boiler that we are trying to introduce some of the three programmes: daily, weekly or weekend.



After this, we need to choose the programme that we want to introduce: daily, weekly or weekend. To do so, from the previous screen, we need to press repeatedly buttons nº5 and nº6 until we reach the desired option.

7.3.5.2 Sub-menu 04.02. Daily Programme



Let's consider, for example, that we want to set up the daily programme. In this case, we need to go to the following screen:



By pressing just once button no.3 we gain access to the daily programming submenu of the boiler and, by default, it will show the following screen:



We need to change the option OFF to ON by pressing buttons no. 1 or no. 2 so that we confirm to the machine that we have selected the daily programme:



Now we need to choose the hours that we would like the boiler to be switched ON. To do this, there are 2 available hours to start and other 2 hours to stop the boiler: START 1 and STOP 1, START 2 and STOP 2.

For example:

- Start at 09:00 hours / stop at 14:30 hours
- Start at 20:30 / stop at 23:00 hours

From the previous screen, we press button n°6 and it will show up



By pressing buttons no. 1 and no. 2 we modify the value "OFF" and we set the time of the first start:



In this same way we can proceed to set the first time to stop:





In order to set up the values of the second time to start and stop, we need to follow the same steps as before:



After this we have already set up the daily programming of the boiler with 2 hours to start and 2 to stop. In case that you may want to set up just one time to start and stop, the options START 2 and STOP 2 should be "OFF."

It is also possible to set up just one time for START 1 (08:00 hours) and stops it manually (STOP 2: "OFF.") Equally, starts it manually (START 1: "OFF") and one time for STOP 1: 22:00 hours.

7.3.5.3 Sub-menu 04.03. Weekly Programme



NOTE: Please, make the set up carefully in order to avoid hour' superposition and/or inactivate the same day in different programmes.

If we intend to make a weekly set up of the boiler we need to take into account that, in this occasion,

we have 4 different hours to start and stop, so we need to ascribe to every day of the week the activation or not, as appropriate. In order to activate them we need to start from the following screen:



By pressing only once button no. 3, we access to the weekly programme sub-menu of the boiler and, by default, it will show up the following screen:



We need to change option "OFF" with "ON" by pressing buttons no.1 and no.2. This way we are confirming that the weekly set up has been selected:



Now, we only need to choose the times; we have 4 different times available to start and stop:

- PROGRAMME 1: START 1 and STOP 1
- PROGRAMME 2: START 2 and STOP 2
- PROGRAMME 3: START 3 and STOP 3
- PROGRAMME 4: START 4 and STOP 4



After this, we need to select the activation or deactivation of each programme depending on the day of the week, for example:

- Programme 1: Monday (ON), Tuesday (ON), Wednesday (OFF), Thursday (OFF), Friday (ON), Saturday (ON), and Sunday (OFF.)
- Programme 2: Monday (OFF), Tuesday (OFF), Wednesday (ON), Thursday (OFF), Friday (OFF), Saturday (ON), and Sunday (ON.)
- Programme 3: Monday (OFF), Tuesday (ON), Wednesday (ON), Thursday (ON), Friday (ON), Saturday (ON), and Sunday (OFF.)
- Programme 4: Monday (ON), Tuesday (ON), Wednesday (OFF), Thursday (OFF), Friday (OFF), Saturday (OFF), and Sunday (ON.)



Thanks to this type of setting we can combine 4 different times throughout the days of the week, but always keeping in mind not to superimpose the times.

7.3.5.4 Sub-menu 04.04. Weekend Programme



In the same way as in the daily programme, this setting up has two independent times to start and two to stop, with the exception that it only applies to Saturday and Sunday. To gain access to this setting up we need to start from the following screen:



We need to confirm the access to this programme by pressing button no.3 "SET" and it should show up the following screen:



We modify the value "OFF" and select "ON":



Finally, we introduce the times to start and stop to complete the desired setting up.

As in the daily programme, if we need to set up only one time to start and stop, the options START 2 and STOP 2 should indicate "OFF."

It is also possible to set up one time to start (START 1: 08.00 h) and stop the boiler manually (STOP 2: "OFF.") In the same way, we can start the boiler manually (START 1: "OFF") and set up a time to stop it (STOP 1: 22.00h.)

7.3.6 Menu 5. Select Language

It allows selecting the languages between those available (Italian, French, English, German, Portuguese, and Spanish.)



7.3.7 Menu 6. Stand-by Mode



When the "Stand-by Mode" is "OFF" the boiler will work depending on the water temperature set selected. Therefore, it will not attend possible demands from the room thermostat of the installation. In the case the "Stand-by Mode" is "ON" the boiler will work depending on the demands from the room thermostat.

When activating the "Stand-by Mode" in the boiler, it will show up two different situations depending on the mode we have chosen ("Summer" or "Winter".) In the case of choosing the "Summer" mode, on condition that we have installed an SHW circuit to our boiler, the boiler turns off when it reaches the desired temperature in the SHW tank and it will restart up when this temperature comes back to the marked threshold. If, on the contrary, the SHW system has not been installed, the boiler could work in the wrong way (**Please, check chapter 7.3.3.**)

If, on the contrary, the chosen mode is the "Winter" one, the boiler does turn off once both the room setting temperature plus a differential and the SHW tank temperature (provided that it has been installed) have been reached. The boiler will restart up as soon as one of the temperatures, either the room setting temperature minus a differential or the SHW tank temperature, goes down. In case we have not installed the sanitary hot water to our boiler, it will work in the same way, but taking into account as reference only the room setting temperature.

In both cases the boiler will be, first of all, in Stand-by mode. In the event of having a period of time, established by the manufacturer, without a demand of water heating, our boiler does turn off until it has a new demand and it will show up in the display the message "Waiting Demand."



IMPORTANT: when the boiler is switched-off, at the moment of the Sanitary Hot Water demand or heating, the circulating pump will start working and the boiler will turn on when the temperature is below the temperature setpoint.

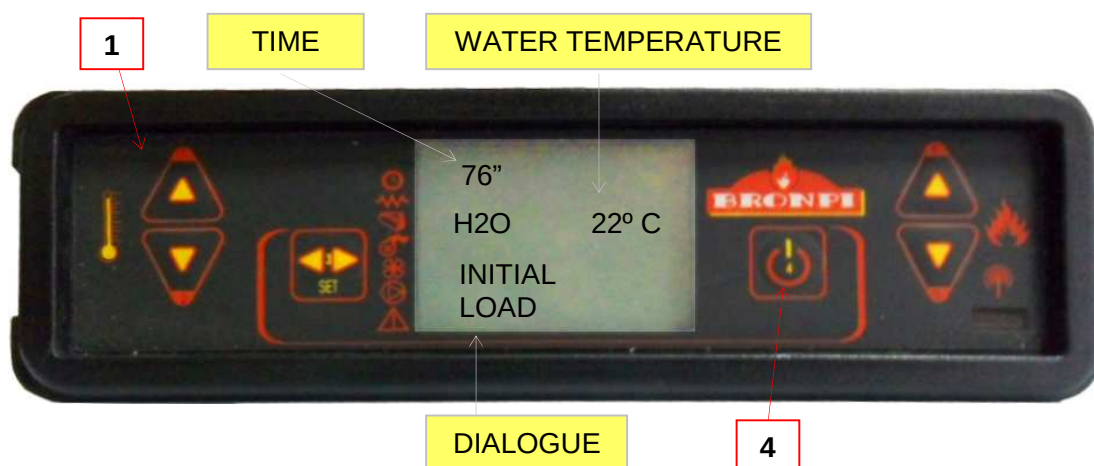


7.3.8 Menu 7. Sound Mode

By activating this modality, the boiler will emit a sound when the system detects a fault and goes into the alarm state.

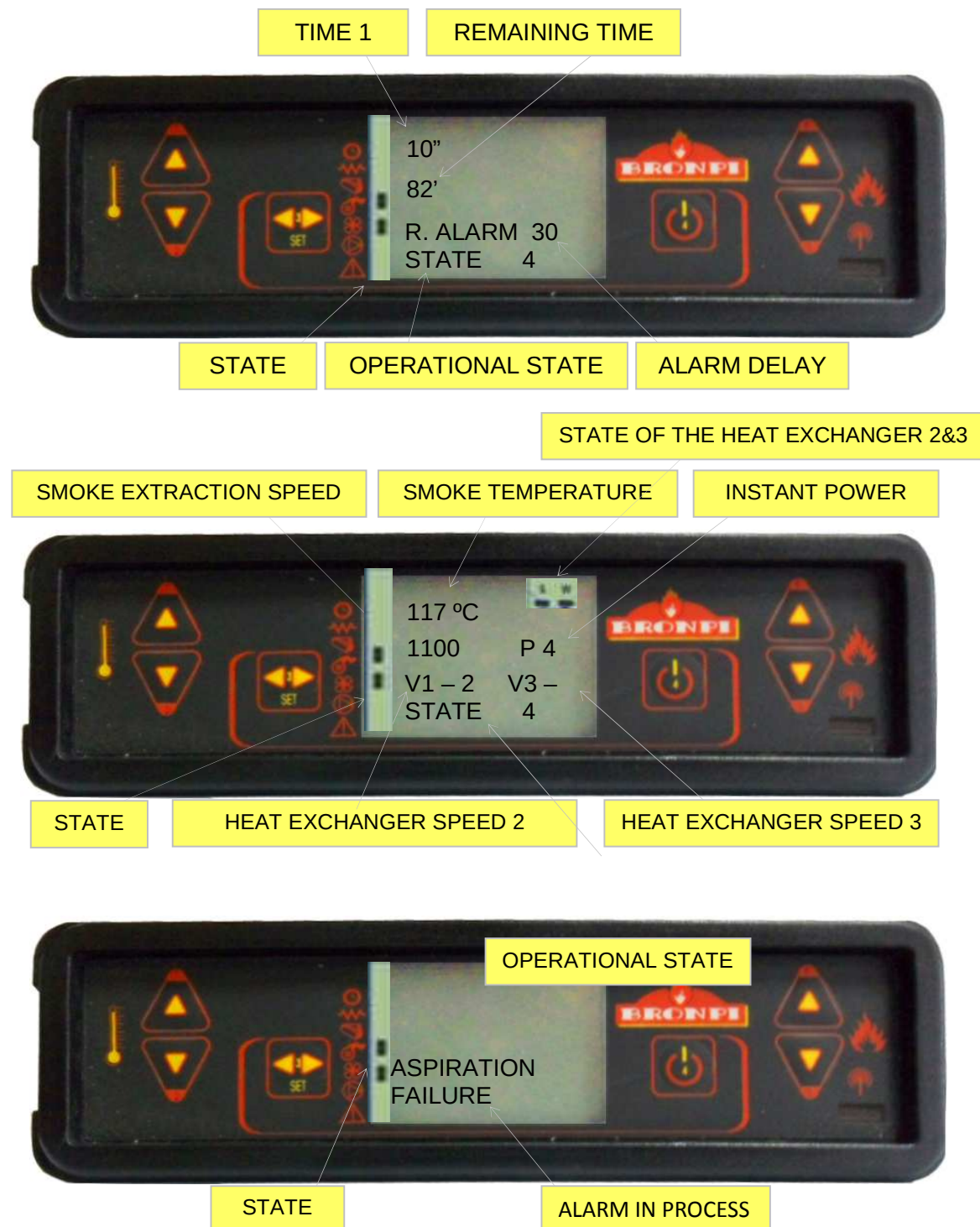
7.3.9 Menu 8. Initial Load

When the boiler is OFF and cold we can make a pellet pre-load during a period of time previously set by the manufacturer. To start the load, please press button 1 and to stop it press button 4



7.3.10 Menu 9. Boiler State

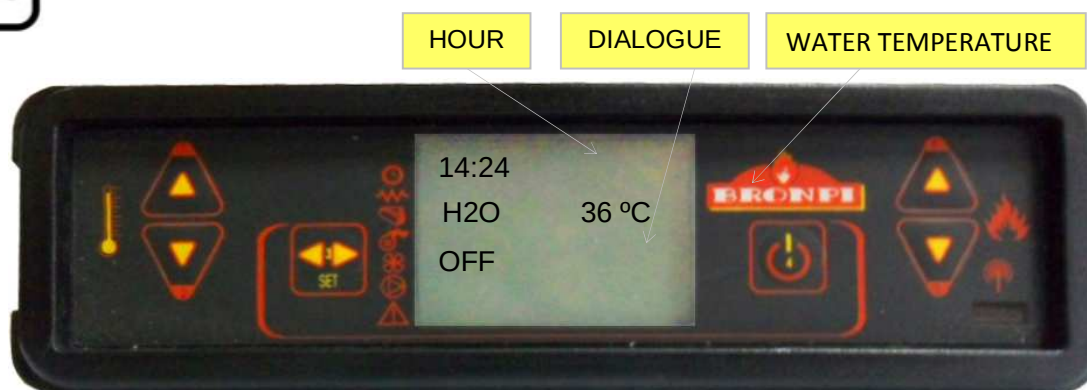
It shows up the current state of the boiler and provides information about the devices connected.



7.4 User Mode

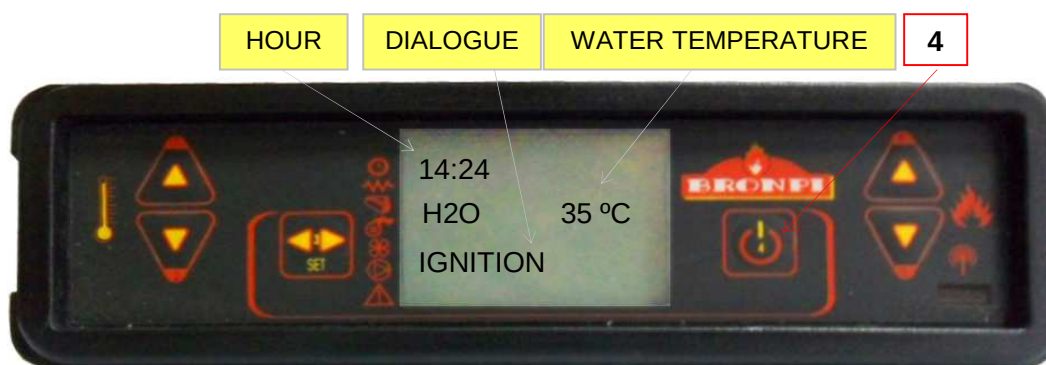


Below is a description of the display normal operation according to the available functions.
Before the ignition of the boiler, the display shows the following screen:



7.4.1 Boiler's Ignition

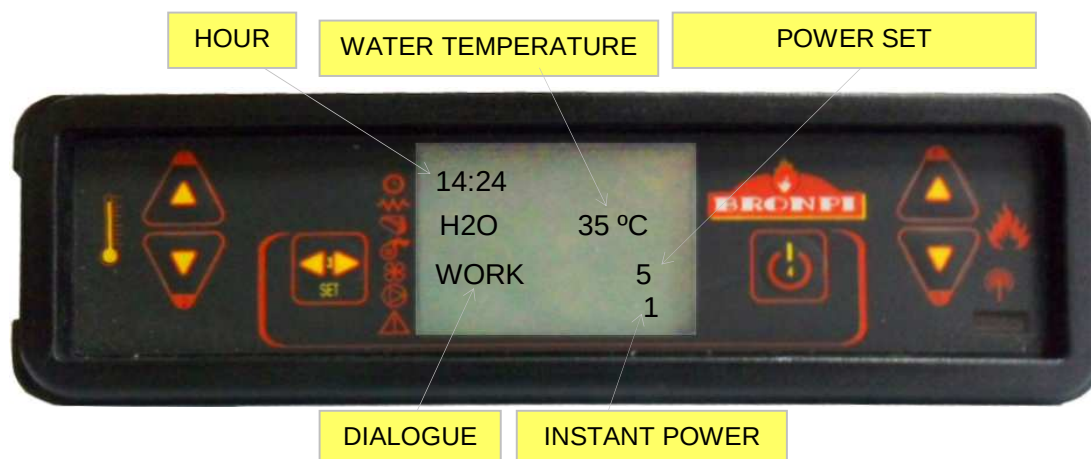
In order to ignite the boiler, press button no.4 during a few seconds. The display will show the ignition state as follows:



The maximum length of the ignition phase is 25 minutes. After this time, if there is no visible flame, the boiler will automatically go into the alarm state and the display will show the message "Ignition Failure."

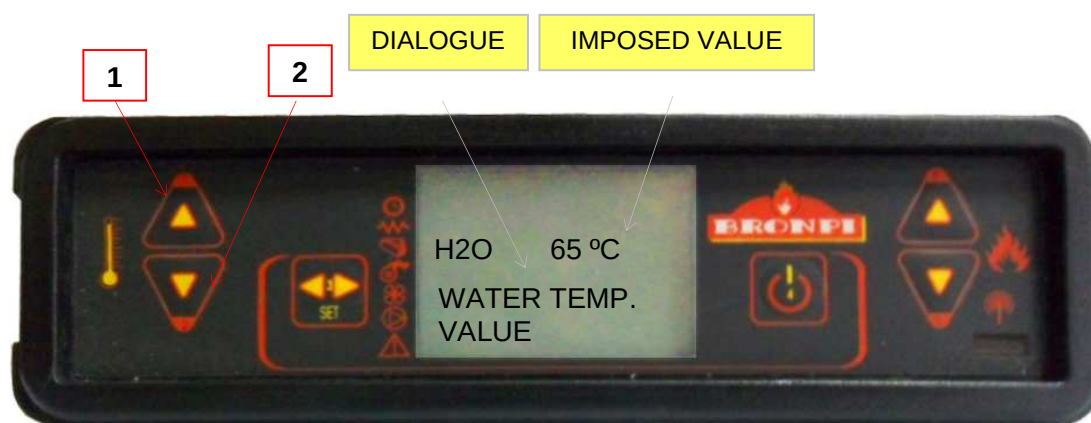
7.4.2 Boiler in Operation

Once the smoke temperature set has been reached, the boiler is working. First of all, it will be in the state “Fire Present” and this will last just a few minutes before considering the boiler totally ignited. In this moment, the display will show the message “Work.” After this, our boiler will be working normally.

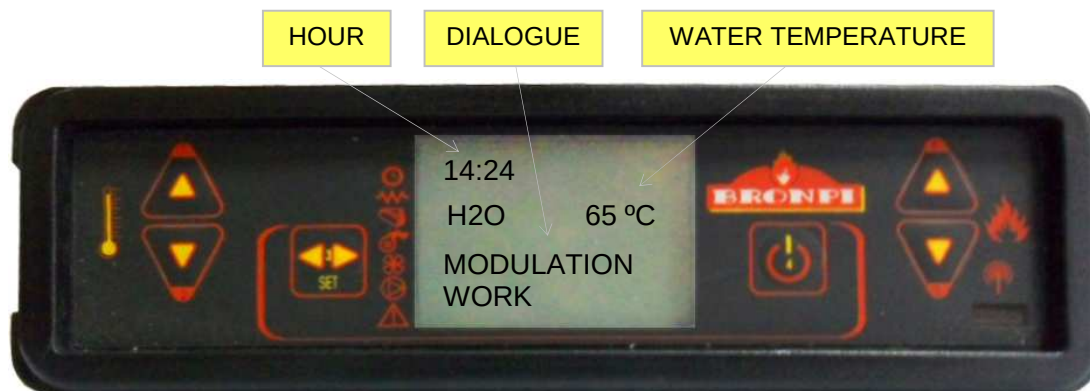


7.4.2 Change Water Temperature Set

In order to modify the water setting temperature, please press button 1 and the display will show the current water setting temperature. We can modify the temperature by pressing buttons number 1 and 2 to increase or decrease it respectively.



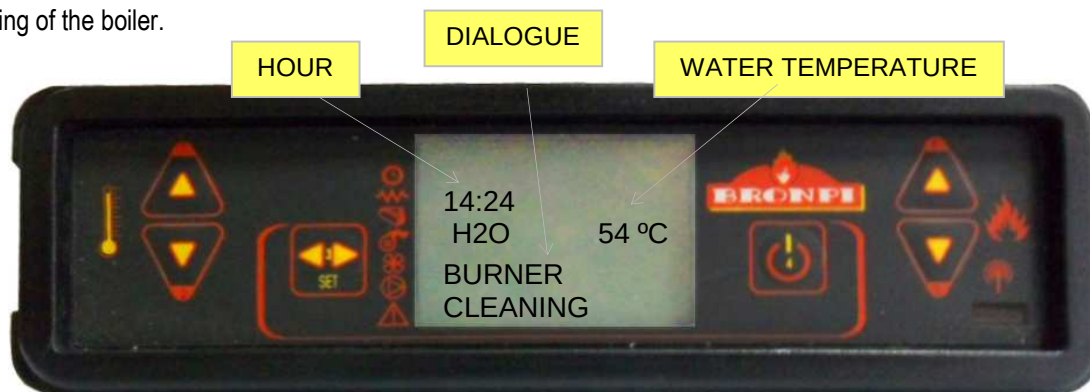
7.4.4 Water Temperature Reaches Temperature Fixed by the User



In the same way as in the room temperature, if the Stand-by mode is ON, once the water temperature reaches the temperature set by the user plus a differential, the boiler will be automatically turned off. In this moment, the boiler will be on hold until the water temperature falls to the set temperature minus a differential.

7.4.5 Burner cleaning

While the boiler is working normally, some automatic cleanings of the burner take place. Mainly, this process consists on cleaning the rest of pellet or olive pit remaining in the burner in order to guarantee a proper working of the boiler.



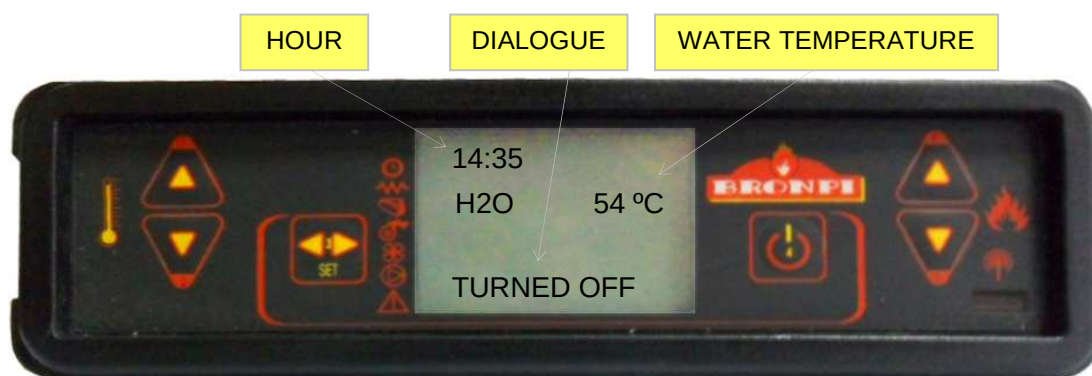
7.4.6 Turning off the Boiler

To turn the boiler off we just need to press *button 4* for a few seconds. Once it has been turned off, the boiler will start the final cleaning stage, in which the pellet/olive pit supply stops and the smoke extractor will be working to the maximum speed. This stage would not finish until the boiler has reached the appropriate cooling temperature.



7.4.7 Boiler Turned off

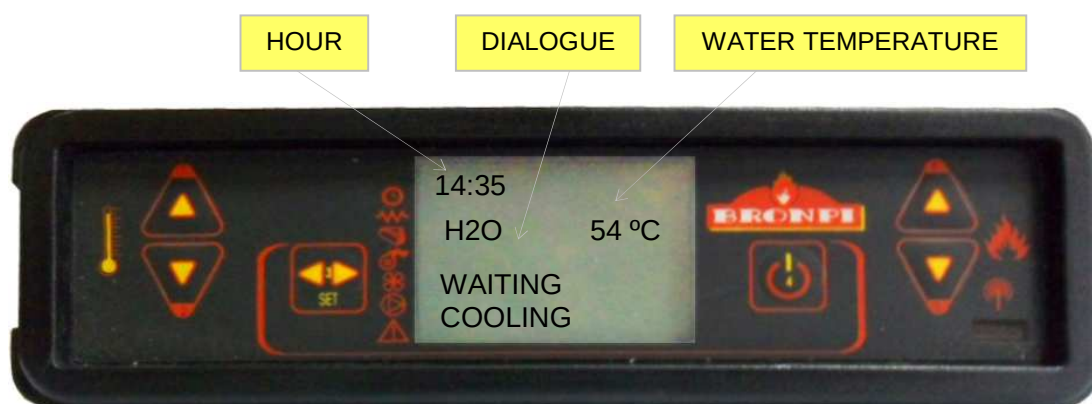
When the boiler is turned off, the display shows the following information:



7.4.8 Re-ignition of the Boiler



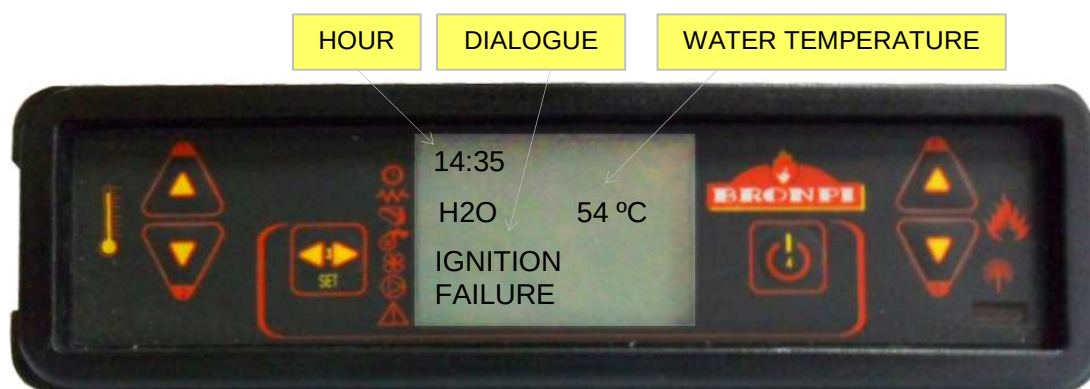
Once the boiler is turned off it would not be possible to restart it up until some safety time goes by and the boiler is cold enough. If you try to start-up the boiler, the display will show up the following information:



7.5 What happens if...?

7.5.1 The Fuel Does not Light

In the event of a start-up failure, the display will show up an alarm as follows:



In order to deactivate the alarm, please press *button 4* and the boiler will be back to normal.

7.5.2 Power Supply Failure (Black Out)

In the event of a power supply cut-off, when the boiler restarts up it goes straight to the *Final Cleaning* stage until the boiler temperature reaches the appropriate cooling temperature. Once the final cleaning has finished, the boiler will turn off until the user ignites it again.



7.6 Alarms

In case of an anomaly during the working, the electronics of the boiler intervenes and highlights the regularities that have taken place in the different ways of working, depending on the type of fault. Therefore, the boiler could show up different alarms.

Every alarm situation makes the boiler to be automatically blocked. By pressing *button 4* we can unblock it. Once the boiler has reached the appropriate cooling temperature, the user can restart it up.

7.6.1 Smoke Probe Temperature Alarm

This alarm goes off when the probe in charge of detecting the exhaust stack temperature is disconnected or it breaks. During the alarm status, the boiler will be in the turn-off stage.



7.6.2 Smoke Temperature Excess Alarm

It goes off when the probe detects a smoke temperature higher than 220°C; therefore the display shows the following message:



During the alarm state, the boiler will be in the turn-off stage.

7.6.3 Ignition Failure Alarm

It goes off when the start-up stage does not run properly. The display will then show up this message and the turn-off stage will immediately be activated.



7.6.4 Switching-off Failure during Working Phase

If the flame extinguishes during the working stage and the smoke temperature goes lower than the minimum working threshold, the alarm does go off and the turn-off stage will be immediately activated.



7.6.5 Pressure Alarm

Circuit hydraulic pressure

It goes off when the pressure transducer detects a wrong pressure, either lower than 0.4 bars or higher than 2.5 bars. The system does automatically interrupt the pellet supply and the display will show up in the screen an alarm. Right after, the turn-off stage is activated.



Combustion chamber pressure

It happens when there is a pressure change in the combustion chamber. The pellet supply is interrupted and the turn-off stage will be immediately activated.



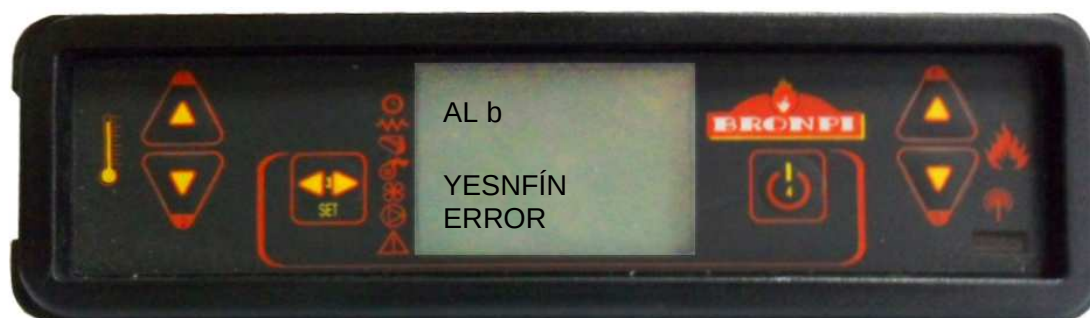
7.6.6 Damaged Smoke Extraction Fan Alarm

It goes off when the smoke extraction fan breaks down. If this happens, the boiler does stop and the display will show up the following alarm. Right after, the turn-off stage will be immediately activated.



7.6.7 Worm Gear Failure Alarm

It goes off in the event of the endless breakdown. If this happens, the boiler stops and the display will show up the following alarm. Right after, the turn-off stage will be immediately activated.



7.6.8 End service

This message is not a alarm. Means that the boiler was working 1200 hours and the technical service must to make the maintenance operations.



Alarm Code	Description	Problem	Possible Solution
AL1	BLACK OUT	The boiler has been temporarily without electric current.	Press <i>button 4</i> for a few seconds and let the final cleaning stage to finish. The boiler will come back to the turn-off status.
AL 2	SMOKE PROBE	Problem with the smoke probe.	Check the probe connection or replace it.
AL 3	SMOKE TEMP.	The smoke temperature is higher than 270°C.	Regulate the pellet drop and/or the extractor speed. Verify the type of fuel that has been used.
AL 4	BREAKDOWN EXTRACTOR	Problem with the smoke extractor.	Check the extractor electrical connection or replace it.
AL 5	START-UP FAILURE	The fuel does not fall or burn.	Check the geared motor and the resistor way of working. Check a possible blockage of the endless. Verify that there is actually fuel in the tank.
AL 6	NO PELLET	There is no fuel in the hopper or it does not fall inside the burner.	Refill tank. Check the endless working. Check the fuel characteristics and that it has not become compacted. Clean the bottom of the hopper.
AL 7	THERMAL ALARM	The fuel thermal security thermostat has shot up.	Restart the thermostat manually. Check the reason why the temperature is excessive and provoked the overheating (fuel drop, draw excess, fuel type.)
AL 8	DEPRESSION	The combustion chamber is on depression.	Verify that the chamber is hermetic: check locks, gaskets... etc. Check that the gas installation is correct (excess of horizontal sections, elbow joint, etc). Possible fuel blockage.
AL 9	LACK OF FLOW	Lack of primary air or installation not appropriate.	Check the primary air inlet. Verify installation (excess of horizontal section, curves, dirtiness, etc).
AL	DIRTY FLOWMETER	The flowmeter sensor is dirty.	Clean the flow sensor to get a proper reading.
AL	FLOWMETER	The flow sensor is	Replace the flow sensor.

	FAILURE	broken.	
AL b	ENDLESS ERROR	The endless spins continuously.	Verify the electrical connection of the endless.
AL	WATER PROBE	Problem with the water probe.	Check the probe connection or replace it.
AL A	HOT WATER	The water temperature is high.	Check the pump working. Check the hydraulic installation. Purge properly.
AL E	WATER PRESSURE	Problems with the hydraulic circuit pressure. Pressure over 2.5 bars or under 0.4 bars.	Check the hydraulic pressure of the installation, which should be between 1 and 1,5 bars.

8 Maintenance and Care

The maintenance operations guarantee a proper working of the product during a long time. Not making these maintenance operations will affect the security of the product.

8.1. Burner Cleaning

The cleaning of the burner should be made daily:

- Remove the burner from its place and unblock the holes with the corresponding poker, which comes together with the boiler.
- Use a vacuum to get rid of the ashes in the burner.
- Hoover the ashes which are inside the burner place.

8.2. Use of the Scraper

A clean smoke chamber guarantees a constant thermal performance during a long time. This type of maintenance should be done, at least, once a day. To do so, you just need to use the corresponding scrapers by activating the handle placed in the side part of the boiler making a backward-forward movement repeatedly.

8.3. Ash Pan Cleaning

The ash pan should be emptied when necessary. The boiler should not be working without having the ash pan inside. In the event of using olive pit as fuel, we need to bear in mind that the amount of ashes will be bigger than those produced by wood pellet. In this case the ash pan cleaning should be done more frequently.

8.4. Joints of the Ash Pan Door and the Burner

The joints guarantee the boiler hermetic nature and, thus, a proper performance. It is necessary to check them regularly; if they are worn-out or damaged they should be replaced immediately. These operations should be done exclusively by an authorised technician.

In order to guarantee a proper performance of the boiler, an authorised technical service should make the maintenance operations, at least, once a year.

If the power cable is damaged it has to be replaced by the technical support service or, in any case, by a qualified technician in order to avoid unnecessary risks.

8.5. Smoke Pipes Cleaning

During the normal use, the boiler does not suffer any damages. When the pellet/olive pit is burnt, some tar and organic steam are slowly produced and these, combined with the humidity, create creosote (soot.) An excessive accumulation of soot could cause problems in the smoke outlet or even provoke a fire in the exhaust stack pipe.

The cleaning should be done, exclusively, when the machine is cold. This operation needs to be done by a chimney sweeper who, at the same time, could do an inspection (it is advisable to keep record of the cleaning dates.)

8.6. Glass Cleaning



IMPORTANT: The glass cleaning has to be done, exclusively, when the machine is cold in order to avoid an explosion. To clean the boiler, please use specific products (you may find these products in your usual distributor.)

GLASS BREAKING: The glasses resist a thermal rise up to 750°C because they are glass-ceramic but they are not subjected to thermal shocks. A glass breaking can only be caused by mechanical crashes (crashes or forceful door closings, etc.) Therefore, replacements of the glasses are not covered by the warranty.

8.7. External Cleaning

Do not clean the external surface of the boiler with water or abrasive products because it could be damaged. It is advisable to use a feather duster or a wet cloth.

8.8. Seasonal Stoppages

After cleaning the boiler, the chimney, and the exhaust stack pipe and having got rid of the ashes and other residues, please close the boiler's door and the corresponding settings. It is advisable to clean up the exhaust stack pipe, at least, once a year. Meanwhile, please check the status of the joint because in the event of not being absolutely complete (that is, if they do not fit the door) they do not guarantee a proper performance of the machine! It would be, then, necessary to replace them. If the place where the boiler has been installed is damp, please put some absorbing salt inside the boiler. Please, protect the interior with neutral petroleum jelly in order to maintain over time the aesthetic appearance without any alteration.

It is also advisable to check and clean, at least once a year, the existing ashes in the lower part of the boiler.

In addition, in the event of seasonal shutdowns and, above all, in those places where the water lime content is high, it is necessary to unblock the pump. This operation should be done by an authorised technician.

The boiler has an electric bell available for preventive maintenance operations which is establish to go off after 1200 hours performing. This will remind you the need of cleaning the boiler deposits. To make this operation you would need to contact an authorised technician.

This message is not an alarm, but a reminder or warning; therefore, it will allow you to use satisfactorily the boiler while this message is shown in the display.

Please, bear in mind that the boiler could need to be cleaned before this 1200 hours established by default or even after them. This depends on the quality of the fuel used, the smoke installation, and the proper regulation of the boiler.

CLEANING TASKS	Daily	Weekly	Monthly	Yearly	Technician	User
Move away the burner from the compartment and clean up the holes using the poker provided. Hoover the ashes with a vacuum.			*			*
Hoover the ashes settled in the burner compartment.			*			*
Scrapers cleaning.					*	
Empty the ash pan or hoover the ashes compartment when necessary.		*				*
Vacuum the bottom of the pellet tank whenever necessary.		*				*
Clean up the interior of the combustion chamber by hoovering the walls with an appropriate vacuum.			*			*
Clean up the smoke extraction motor, the entire combustion chamber, pellet tank, whole replacement of the joints and new silicone where necessary, smoke pipe, deposits...					*	
Check all electronic components (electronic nameplate, display...)					*	
Check all electric components (resistor, smoke extraction motor, circulating pump...)					*	

9 Sanitary Hot Water Tank (SHW)



If we have connected to our **boiler** an SHW tank we may have to take into consideration the following points:

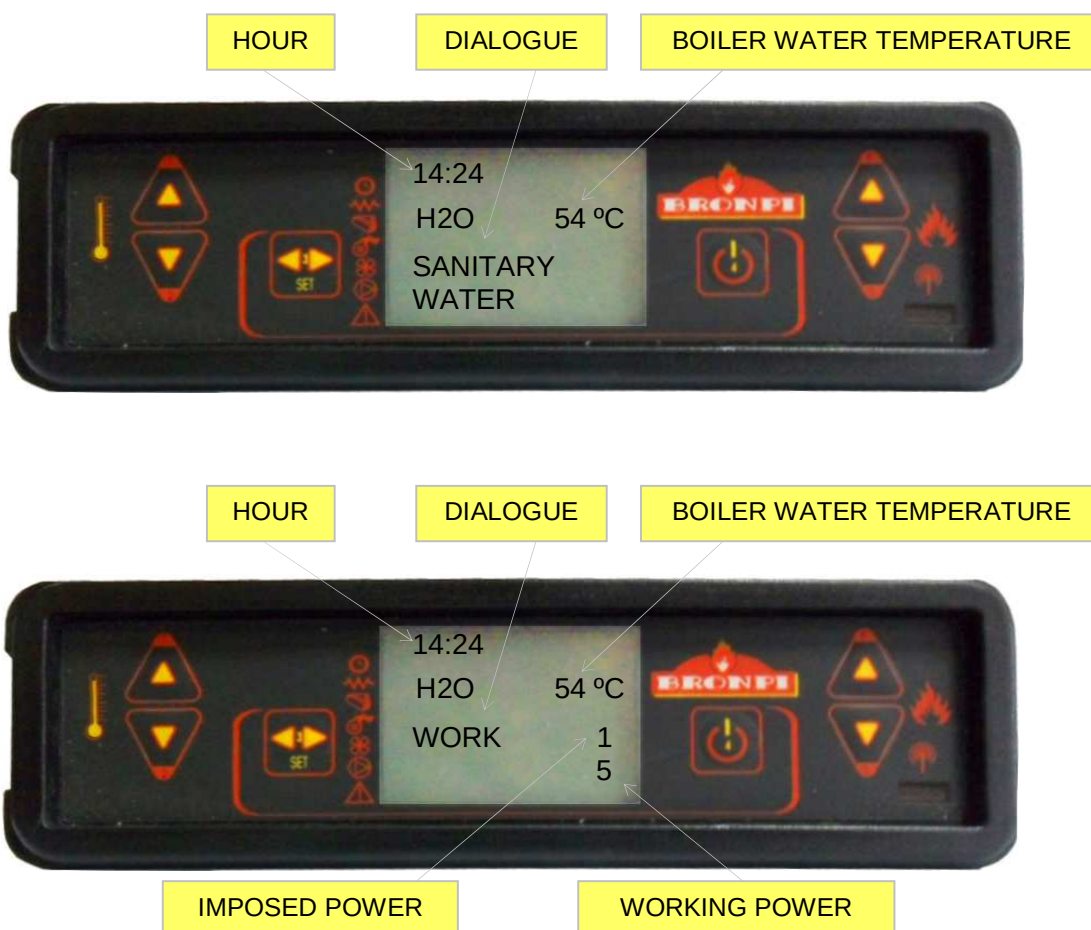
- Our boiler can only regulate an SHW tank, so it does not guarantee a proper performance in the event of replacing this system with other alternatives.
- This tank should have been provided with a thermostat, which will measure the inner temperature and will regulate the exchange water temperature when necessary.
- During the seasons of the year that the user would not consider necessary the simultaneous use of heating and the SHW system (that is, when the user prefers to use only the boiler) we may need to

go to the control panel (Display) and set the "Summer" mode. This way, the boiler will work only when there is a demand from the tank (Please, check chapter 7.3.3.)

- When the boiler is performing in the "Winter" mode we may bear in mind that it gives priority to the heating of the SHW tank. This is why all the transmission power goes to this purpose and, therefore, it stops the transmission to the heating circuit until the first one has reached the point of demand.



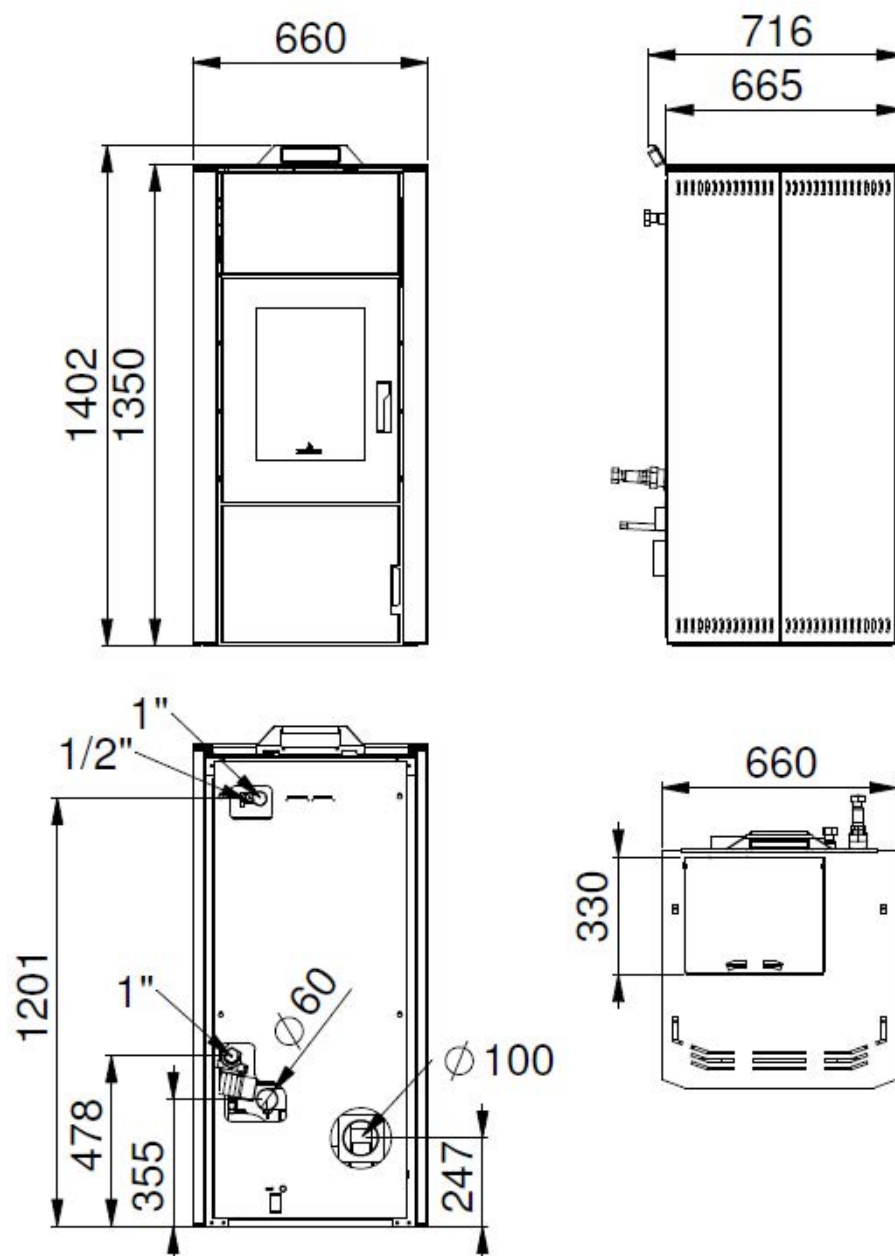
The installer or Technical Assistance Service, during the ignition of the boiler and inside the technical menu (MENU 10), will have to choose the power (1, 2, 3, 4 or 5) that the boiler must have under the hot sanitary water demand according to the power of the heat exchanger. This means that, whatever the working power at heating power, under the sanitary hot water demand, the boiler will always work at the power established by the installer or technician. Also, once the sanitary hot water temperature has been reached, it will enter into the working power corresponding to the heating mode. The following messages are shown when the heating system of sanitary hot water starts working:



10 General Measurements

Measurements in milimeters

Carlota-MF



11 Maintenance

Date	Comments	Adopted Solution

Date	Comments	Adopted Solution



BRONPI CALEFACCION S.L.
For any other inquiry, please,
contact your distributor.